

REMARKS

This is in response to the Office Action mailed on May 5, 2004, in which claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ngo et al (USP 5,793,551) ("Ngo"), claims 6-12, 14-16 and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of Applicant's Admitted Prior Art ("AAPA"), and claim 13 was allowed as patentable over the prior art.

Allowed Claims

The allowance of claim 13 is gratefully acknowledged.

Claim Rejections - 35 U.S.C. § 102

Claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ngo. In order to reject a claim under 35 U.S.C. § 102(b) as being anticipated by the prior art, each element of the claim under construction must be disclosed in a single prior art reference. In re Dillon, 919 F.2d 688, 16 U.S.P.Q.2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991).

In rejecting independent claim 1, the Examiner noted that Ngo discloses a "first coupling circuit including a capacitor and an active element coupled in series between the first input node and the base of the input transistor of the second amplifier circuit (see fig. 3 elements 42, 62, 66, 54 and disclosure thereof)." Claim 1, as amended, recites "a first coupling circuit including a capacitor and a coupling transistor, the first coupling circuit being connected such that a base of the coupling transistor is connected to the first input signal node and the capacitor is connected between an emitter of the coupling transistor and a base of the input transistor of the second amplifier circuit." Ngo does not disclose this configuration, since the active element (see fig. 3 element 62) of the first coupling circuit is not connected to the corresponding input signal node (see fig. 3 element 18). Rather, the base of the active element (see fig. 3 element 62) is connected to the collector of the first input transistor (see fig. 3 element 58) of the first amplifier circuit. Because Ngo fails to disclose

each element of amended claim 1, the rejection of claim 1 under 35 U.S.C. § 102(b) should be withdrawn.

Claims 2-5 were also rejected under 35 U.S.C. § 102(b) as being unpatentable over Ngo. With this Amendment, claim 5 has been amended to correspond with the amendment made to independent claim 1. Claims 2-5 depend from amended independent claim 1. As such, these claims are allowable with their amended independent base claim. In addition, it is respectfully submitted that the combinations of features recited in claims 2-5 are patentable on their own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).

Claim Rejections - 35 U.S.C. § 103

Claims 6-12, 14-16 and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. In order to reject a claim under 35 U.S.C. § 103 as being obvious over a combination of references, all the claim limitations must be taught or suggested by the combination. See M.P.E.P. 2143.03, citing In re Royka, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

With regard to amended independent claim 6, the Examiner states that the limitations recited in claims 6-12 are met in the rejections of claims 1-5. The Examiner goes on to state that “Ngo et al discloses a read head but fails to specify that the head is a magnetoresistive head . . . [h]owever . . . [i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the disclosure of Ngo et al to provide a capability of reading the recorded signals using magnetoresistive head . . .” As discussed above, Ngo does not teach each and every element of amended claim 1. For the same reasons discussed above with regard to amended claim 1, Ngo fails to teach “a first coupling circuit including a capacitor and a coupling transistor, the first coupling circuit being connected such that a base of the coupling transistor is connected to the first input signal node and the capacitor is connected between an emitter of the coupling transistor and a base of the input transistor of the second amplifier circuit,” as required by

amended claim 6. As stated by the Examiner, the AAPA is combined with Ngo for the sole purpose of teaching a magnetoresistive read head. Therefore, the combination of Ngo and the AAPA references does not teach or suggest “a first coupling circuit including a capacitor and a coupling transistor, the first coupling circuit being connected such that a base of the coupling transistor is connected to the first input signal node and the capacitor is connected between an emitter of the coupling transistor and a base of the input transistor of the second amplifier circuit,” as required by amended claim 6. Because the combination of Ngo and AAPA does not teach or suggest each element of amended independent claim 6, the references do not render claim 6 obvious. Therefore, the rejection of amended independent claim 6 under 35 U.S.C. § 103(a) should be withdrawn.

Claims 7-10 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. With this Amendment, claim 10 has been amended to correspond with the amendment made to independent claim 6. Claims 7-10 depend from amended independent claim 6. As such, these claims are allowable with their amended independent base claim. In addition, it is respectfully submitted that the combinations of features recited in claims 7-10 are patentable on their own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).

Independent claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. The Examiner states that the limitations recited in claim 11 are met in the rejections of claims 1-5. The Examiner goes on to state that “Ngo et al discloses a read head but fails to specify that the head is a magnetoresistive head . . . [h]owever . . . [i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the disclosure of Ngo to provide a capability of reading the recorded signals using magnetoresistive head . . .” As above, the AAPA reference is combined with Ngo for the sole purpose of teaching a magnetoresistive head. Claim 11 recites “a first coupling circuit comprising a first coupling transistor having a base connected to the first input signal node, a collector connected to the fixed potential, and an emitter ac coupled to a base of the second input transistor . . .” As seen in Fig. 3,

the Ngo reference does not teach a coupling circuit as described by claim 11. The bases of transistors 62 and 64 are not connected to any of the input nodes 18-21. Rather, the bases of transistors 62 and 64 are connected to a voltage potential (VCC) as well as the collectors of the input transistors of the amplifier circuits (58, 60). Transistors 44, 46, 58 and 60 each have a base connected to inputs 18 or 19, but do not have an emitter ac coupled to a base of any other transistor. Claim 11 requires a first coupling transistor having both a base connected to a first input signal node as well as an emitter ac coupled to a base of the second input transistor. The combination of Ngo and the AAPA does not teach or suggest "a first coupling circuit comprising a first coupling transistor having a base connected to the first input signal node, a collector connected to the fixed potential, and an emitter ac coupled to a base of the second input transistor . . ." as required by claim 11. Because the combination of Ngo and AAPA fails to teach or suggest each element of claim 11, the references do not render claim 11 obvious. Therefore, the rejection of independent claim 11 under 35 U.S.C. § 103(a) should be withdrawn.

Claim 12 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. Claim 12 depends from independent claim 11. As such, this claim is allowable with its independent base claim. In addition, it is respectfully submitted that the combination of features recited in claim 12 is patentable on its own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).

Independent claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. The Examiner states that the limitations recited in claim 14 are met in the rejections of claims 6-12. With this Amendment, claim 14 has been amended in a manner similar to claims 1 and 6, indicating that a capacitor and a coupling transistor are coupled between a respective input signal node and a base of a respective input transistor, with the base of the coupling transistor connected to the respective input signal node. For the same reasons discussed above with respect to claims 1 and 6, the rejection of amended independent claim 14 under 35 U.S.C. § 103(a) should be withdrawn.

Claims 15, 16, 19 and 20 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. Claims 15 and 16 depend from amended independent claim 14. As such, these claims are allowable with their independent base claim. In addition, it is respectfully submitted that the combinations of features recited in claims 15 and 16 are patentable on their own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).

Claims 19 and 20 have been canceled without prejudice, thereby rendering moot their rejection.

CONCLUSION

In view of the foregoing, all pending claims 1-16 are in condition for allowance. A notice to that effect is respectfully requested.

Entry of this Amendment after final rejection is appropriate because it places all of the pending claims in condition for allowance. In addition, the amendments made to the independent claims do not change the scope of those claims in such a way that would require a new search, since the circuit connections recited in the amended claims were already set forth in either dependent claims or in independent claim 13, which have already been searched and considered by the Examiner.

The Examiner is cordially invited to contact the undersigned at the telephone number listed below if such a call would in any way facilitate the allowance of this application.

Respectfully submitted,

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